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Census 2000 Sample Data and ACS 3-year Averages Quality Measures Comparison Documentation

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CONTENTS

1. INTRODUCTION AND BACKGROUND

To reduce the operational complexity of the decennial census and increase the currency of detailed population and housing data, the Census Bureau has implemented the 2010 Census re-engineering strategy. The American Community Survey (ACS) is one of three program components required to achieve the 2010 Census re-engineering strategic goals. The ACS collects long form data throughout the decade, instead of all at once in the decennial census.

The replacement of the Census sample with the ACS has raised questions concerning the operational feasibility of the ACS, and the reliability and usability of ACS data. To help answer these questions, the U.S. Census Bureau has and continues to conduct much research. In 1994 the Census Bureau initiated the ACS development program to develop the methods for providing long form data each year. Since then the ACS development program has produced many reports that demonstrate the operational feasibility of the ACS, and the reliability and usability of ACS data. Research objectives have continued more recently through the implementation of an ACS Research and Evaluation Program. As part of this research objective, we will be producing a report to help data users understand how the quality of the ACS 3-year average data (average of 1999 ACS, 2000 ACS, and 2001 ACS) compare to the Census 2000 long form data.

To allow for comparisons of quality, we provide quality measures and their standard errors for the 36 ACS counties and tracts in the ACS test sites. This document describes the computation of the quality measures and their associated standard errors.

1.1 Census 2000 Sample

Census 2000 collected data using two basic types of questionnaires—the short form, containing only the "100%" items asked of the entire population, and the long form, containing the "100%" items as well as a myriad of detailed housing unit, household, and population items known as sample items. The "100%" items were name, relationship, sex, age, Hispanic origin, race, and tenure for occupied housing units, and vacancy status for vacant housing units. A national average of about one-in six housing units were expected to be enumerated on the long form and make up the Census 2000 sample; the other five-sixths of the addresses were to be enumerated on the short form.

This comparison project is based on characteristic distributions as estimated by the Census 2000 sample, and additionally on information reflecting overall response to the Census 2000 long form questionnaire. Not all units enumerated on long form questionnaires are eligible to be members of the Census 2000 sample. To be eligible for inclusion, long form response records representing occupied housing units (or households) had to meet a set of criteria identifying them as 'sample data defined.' The household records had to contain at least one person who was both "100%" data defined and sample data defined. To satisfy these criteria a person record had to have answers to at least two of the "100%" population items and two of the sample population items. No answers to any housing items were required of occupied long form units to be considered

census sample-eligible. For vacant long form units to be placed in the Census 2000 sample they had to have answers to at least two housing sample items.

In addition to estimates based on housing units and the household population, the Census 2000 sample also included data from the group quarters population. These records were removed from the sample for this analysis. All but one of the Census 2000 quality measures included in this study are based on information directly affecting the sample. The one exception is the long form questionnaire self-response rate, which is based on the form counts from the full census count process. Susan P. Love of the U.S. Census Bureau contributed the information given in this section.

2. QUALITY MEASURES

We compute the following four quality measures. Descriptions of each quality measure are given in section 2.1 thru 2.4. The descriptions in these sections are written in terms of the variables appearing on the quality measures data files. To learn more about these data files and the variables mentioned in sections 2.1 thru 2.4, see "Census 2000 Long Form Data and ACS 3-year Averages Quality Measures Comparison Data file Layouts" or "qmfiles.doc". Susan P. Love of the U.S. Census Bureau contributed the descriptions of the quality measures.

- Self-Response Rate
- Sample Unit Nonresponse Rate
- Item Allocation Rate
- Sample Completeness Ratios

2.1 Self-Response Rate

The Self-response rates are provided for each of the 36 ACS counties, and for each tract in the 36 ACS counties, regardless of the number of units in the tract. In addition to the self-response rate, the numerator and denominator of the rate for each county and tract are provided. If the denominator of the rate is zero, the rate is shown to be missing on the file.

2.1.1 Census 2000 Long Form Self-Response Rate

The Census 2000 long form self-response rate is based on the 100 percent count of occupied long form housing units enumerated in mailback types of enumeration areas (TEA)[1]. The count is weighted by the reciprocal of the sampling fraction used to designate long form sample units (BSAM) for the block in which they were enumerated. The BSAM values are 2, 4, 6, and 8. The weighted block level long form units are

[1] In mailback TEAs, respondents were asked to return their completed Census form by mail. This could have been a mailout/mailback TEA where the Census form was delivered to the housing units by the United States Postal Service (USPS), or an update/leave TEA where the form was delivered in person by a Census enumerator.

aggregated to the tract level, and the rate computed from the weighted tract counts. The self-response rate formula is below.

cen_srr	=	Census long form self-response rate
cen_srhu	=	Census BSAM weighted count of occupied self-response long form housing units enumerated in mailback TEAs (numerator)
cen_olhu	=	Census BSAM weighted count of occupied long form housing units enumerated in mailback TEAs (denominator)

$$cen\_srr = \left(\frac{cen\_srhu}{cen\_olhu} \right) * 100$$

2.1.2 ACS Single Year and 3-Year Average Self-Response Rates

The ACS 3-year average self-response rate is based on the base weighted (WSSF) occupied housing unit counts, including the base weighted noninterview units. The self-response rate formula is below.

acs_srr	=	ACS 3-year average self-response rate
A99_srr	=	ACS self-response rate for 1999
A99_srrn	=	ACS WSSF weighted count of occupied self-response housing units including self-response noninterviews (numerator) for 1999
A99_srrd	=	ACS WSSF weighted count of total occupied housing units including noninterviews (denominator) for 1999
A00_srr	=	ACS self-response rate for 2000
A00_srrn	=	ACS WSSF weighted count of occupied self-response housing units including self-response noninterviews (numerator) for 2000
A00_srrd	=	ACS WSSF weighted count of total occupied housing units including noninterviews (denominator) for 2000
A01_srr	=	ACS self-response rate for 2001
A01_srrn	=	ACS WSSF weighted count of occupied self-response housing units including self-response noninterviews (numerator) for 2001
A01_srrd	=	ACS WSSF weighted count of total occupied housing units including noninterviews (denominator) for 2001

$$A99\_srr = \left(\frac{A99\_srrn}{A99\_srrd} \right) * 100$$

$$A00\_srr = \left(\frac{A00\_srrn}{A00\_srrd} \right) * 100$$

$$A01\_srr = \left(\frac{A01\_srrn}{A01\_srrd} \right) * 100$$

$$acs\_srr = \left(\frac{A99\_srrn + A00\_srrn + A01\_srrn}{A99\_srrd + A00\_srrd + A01\_srrd} \right) * 100$$

2.2 Sample Unit Nonresponse Rate

The sample unit nonresponse rates are provided for each of the 36 ACS counties, and for each tract in the 36 ACS counties, regardless of the number of units in the tract. The sample unit nonresponse rate is also calculated for occupied housing units. In addition to the sample unit nonresponse rate, the numerator and denominator of the rate for each county and tract are provided. If the denominator of the rate is zero, the rate is shown to be missing on the file.

2.2.1 Census 2000 Sample Unit Nonresponse rates

The Census 2000 sample unit nonresponse rate is based on the comparison of the number of long form sample data defined units weighted by their probability of selection and the 100% housing unit count. The long form units that met the criteria to be in sample are multiplied by the BSAM value for the block in which they were enumerated. The sample unit nonresponse rate formulae are below.

cen_unr = Census 2000 sample unit nonresponse rate
cen_tothu = Census 2000 total housing units
cen_ddhu = Census 2000 BSAM weighted count of long form sample data defined housing units

$$cen\_unr = \left(\frac{cen\_tothu - cen\_ddhu}{cen\_tothu} \right) * 100$$

Occupied sample unit nonresponse rate
cen_ounr = Census 2000 occupied sample unit nonresponse rate
cen_occhu = Census 2000 occupied housing units
cen_oddhu = Census 2000 BSAM weighted count of long form occupied sample data defined housing units

$$cen\_ounr = \left(\frac{cen\_occhu - cen\_oddhu}{cen\_occhu} \right) * 100$$

The numerator of these formulae represents the shortage in the Census 2000 sample of housing units due to response records for long form units not being sample data defined. It is expressed as a percent of the total enumerated units.

For an occupied census long form unit to be sample data defined (SDD) it must have at least one person record associated with it that has at least two 100% population items and two sample population items answered.

2.2.2 ACS Single Year and 3-Year Average Sample Unit Nonresponse Rates

This is based on the base weighted (WSSF) total housing unit counts, including the base weighted noninterview cases. The sample unit nonresponse rate formulae are below.

Sample unit nonresponse rates

acs_unr	=	ACS 3-year average sample unit nonresponse rate
A99_unr	=	ACS sample unit nonresponse rate for 1999
A99_unrn	=	ACS WSSF weighted count of noninterview units (numerator) for 1999
A99_unrd	=	ACS WSSF weighted count of total (interview plus noninterview) housing units (denominator) for 1999
A00_unr	=	ACS sample unit nonresponse rate for 2000
A00_unrn	=	ACS WSSF weighted count of noninterview units (numerator) for 2000
A00_unrd	=	ACS WSSF weighted count of total (interview plus noninterview) housing units (denominator) for 2000
A01_unr	=	ACS sample unit nonresponse rate for 2001
A01_unrn	=	ACS WSSF weighted count of noninterview units (numerator) for 2001
A01_unrd	=	ACS WSSF weighted count of total (interview plus noninterview) housing units (denominator) for 2001

$$A99\_unr = \left(\frac{A99\_unrn}{A99\_unrd} \right) * 100$$

$$A00\_unr = \left(\frac{A00\_unrn}{A00\_unrd} \right) * 100$$

$$A01\_unr = \left(\frac{A01\_unrn}{A01\_unrd} \right) * 100$$

$$acs\_unr = \left(\frac{A99\_unrn + A00\_unrn + A01\_unrn}{A99\_unrd + A00\_unrd + A01\_unrd} \right) * 100$$

Occupied sample unit nonresponse rates

acs_ounr	=	ACS 3-year average occupied sample unit nonresponse rate
A99_ounr	=	ACS occupied sample unit nonresponse rate for 1999
A99_ounrn	=	ACS WSSF weighted count of noninterview units (numerator) for 1999
A99_ounrd	=	ACS WSSF weighted count of total occupied housing units (denominator) for 1999
A00_ounr	=	ACS occupied sample unit nonresponse rate for 2000
A00_ounrn	=	ACS WSSF weighted count of noninterview units (numerator) for 2000

A00_ounrd = ACS WSSF weighted count of total occupied housing units (denominator) for 2000
A01_ounr = ACS occupied sample unit nonresponse rate for 2001
A01_ounrn = ACS WSSF weighted count of noninterview units (numerator) for 2001
A01_ounrd = ACS WSSF weighted count of total occupied housing units (denominator) for 2001

$$A99\_ounr = \left(\frac{A99\_ounrn}{A99\_ounrd} \right) * 100$$

$$A00\_ounr = \left(\frac{A00\_ounrn}{A00\_ounrd} \right) * 100$$

$$A01\_ounr = \left(\frac{A01\_ounrn}{A01\_ounrd} \right) * 100$$

$$acs\_ounr = \left(\frac{A99\_ounrn + A00\_ounrn + A01\_ounrn}{A99\_ounrd + A00\_ounrd + A01\_ounrd} \right) * 100$$

For an ACS occupied unit to be noninterview it has to fail the survey's Acceptability Index (AI). This index is computed by summing the number of basic items with answers (age or complete date of birth entry count as two), and then dividing this sum by the number of household members. Households with AIs of less that 2.5 are treated as survey noninterviews. Note, that all vacant units are considered interviews in the ACS. So, A99_ounrn equals A99_unrn, A00_ounrn equals A00_unrn, and A01_ounrn equals A01_unrn.

2.3 Item Allocation Rates

To calculate item nonresponse, we calculated item allocation rates. They are provided for each of the 36 ACS counties, and for each tract in the 36 ACS counties, regardless of the number of units in the tract. At the county level, the item allocation rates are also broken out by response mode. They are not broken out by response mode at the tract level. In addition to the item allocation rates, the numerator and denominator of the rate for each county and tract are provided. If the denominator of the rate is zero, the rate is shown to be missing on the file.

There are two response modes: self-response and interviewer-response. Self-response means that the household data came from a mail return, and interviewer-response means that the data came from a follow-up form or instrument. For Census 2000, the follow-up operations were Nonresponse follow-up and Coverage Improvement Follow-up, and for the ACS the follow-up operations were Computer Assisted Telephone Interviewing (CATI) and Computer Assisted Person Interviewing (CAPI).

2.3.1 Census 2000 Sample Item Allocation Rates

For each item in common with an item on the ACS questionnaire, the Census 2000 sample item allocation rates are based on the final-weighted allocations made by the census edit and allocation process on all records placed in the Census 2000 sample (on the Census 2000 Sample Census Edited File or SCEF). These items and their associated edit outputs are described in Attachment 1. The item allocation rate formula is below.

Total item allocation rate

cen_tal = Census 2000 sample total item allocation rate
cen_tot = Census 2000 sample final weighted total persons/units in the universe (denominator)
cen_altot = Census 2000 sample final weighted total persons/units with that item allocated (numerator)

$$cen\_tal = \left(\frac{cen\_altot}{cen\_tot} \right) * 100$$

Self-response item allocation rate

cen_sal = Census 2000 sample self-response item allocation rate
cen_stot = Census 2000 sample form final weighted total persons/units in the universe, which were self-respondents (denominator)
cen_saltot = Census 2000 sample final weighted total persons/units with that item allocated, which were self-respondents (numerator)

$$cen\_sal = \left(\frac{cen\_saltot}{cen\_stot} \right) * 100$$

Interviewer-response item allocation rate

cen_eal = Census 2000 sample interviewer-response item allocation rate
cen_etot = Census 2000 sample final weighted total persons/units in the universe, which were interviewer-respondents (denominator)
cen_ealtot = Census 2000 sample final weighted total persons/units with that item allocated, which were interviewer respondents (numerator)

$$cen\_eal = \left(\frac{cen\_ealtot}{cen\_etot} \right) * 100$$

2.3.2 ACS Single Year and 3-Year Average Item Allocation Rates

These rates are based on the final-weighted allocations made by the ACS edit and allocation process for each item in common with an item on the Census 2000 long form questionnaire. These items and their associated edit outputs are described in Attachment 1. The item allocation rate formula is below.

Total item allocation rates

acs_tal	=	ACS 3-year average total item allocation rate
A99_tal	=	ACS total item allocation rate for 1999
A99_tot	=	ACS final weighted total of persons/units in the universe (denominator) for 1999
A99_altot	=	ACS final weighted total persons/units with that item allocated (numerator) for 1999
A00_tal	=	ACS 3 total item allocation rate for 2000
A00_tot	=	ACS final weighted total of persons/units in the universe (denominator) for 2000
A00_altot	=	ACS final weighted total persons/units with that item allocated (numerator) for 2000
A01_tal	=	ACS total item allocation rate for 2001
A01_tot	=	ACS final weighted total of persons/units in the universe (denominator) for 200
A01_altot	=	ACS final weighted total persons/units with that item allocated (numerator) for 2001

$$A99\_tal = \left(\frac{A99\_altot}{A99\_tot} \right) * 100$$

$$A00\_tal = \left(\frac{A00\_altot}{A00\_tot} \right) * 100$$

$$A01\_tal = \left(\frac{A01\_altot}{A01\_tot} \right) * 100$$

$$acs\_tal = \left(\frac{A99\_altot + A00\_altot + A01\_altot}{A99\_tot + A00\_tot + A01\_tot} \right) * 100$$

Self-response item allocation rates

acs_sal	=	ACS 3-year average self-response item allocation rate
A99_sal	=	ACS self-response item allocation rate for 1999
A99_stot	=	ACS final weighted total of persons/units in the universe (denominator) for 1999, which were self-respondents
A99_saltot	=	ACS final weighted total persons/units with that item allocated (numerator) for 1999, which were self-respondents
A00_sal	=	ACS 3 self-response item allocation rate for 2000
A00_stot	=	ACS final weighted total of persons/units in the universe (denominator) for 2000, which were self-respondents
A00_saltot	=	ACS final weighted total persons/units with that item allocated (numerator) for 2000, which were self-respondents
A01_sal	=	ACS self-response item allocation rate for 2001
A01_stot	=	ACS final weighted total of persons/units in the universe (denominator) for 2001, which were self-respondents

A01_saltot = ACS final weighted total persons/units with that item allocated (numerator) for 2001, which were self-respondents

$$A99\_sal = \left(\frac{A99\_saltot}{A99\_stot} \right) * 100$$

$$A00\_sal = \left(\frac{A00\_saltot}{A00\_stot} \right) * 100$$

$$A01\_sal = \left(\frac{A01\_saltot}{A01\_stot} \right) * 100$$

$$acs\_sal = \left(\frac{A99\_saltot + A00\_saltot + A01\_saltot}{A99\_stot + A00\_stot + A01\_stot} \right) * 100$$

Interviewer-response item allocation rates

acs_eal = ACS 3-year average interviewer-response item allocation rate
A99_eal = ACS interviewer-response item allocation rate for 1999
A99_etot = ACS final weighted total of persons/units in the universe (denominator) for 1999, which were interviewer-respondents
A99_ealtot = ACS final weighted total persons/units with that item allocated (numerator) for 1999, which were interviewer-respondents
A00_eal = ACS 3 interviewer-response item allocation rate for 2000
A00_etot = ACS final weighted total of persons/units in the universe (denominator) for 2000, which were interviewer-respondents
A00_ealtot = ACS final weighted total persons/units with that item allocated (numerator) for 2000, which were interviewer-respondents
A01_eal = ACS enumerator-response item allocation rate for 2001
A01_etot = ACS final weighted total of persons/units in the universe (denominator) for 2001, which were interviewer-respondents
A01_ealtot = ACS final weighted total persons/units with that item allocated (numerator) for 2001, which were interviewer-respondents

$$A99\_eal = \left(\frac{A99\_ealtot}{A99\_etot} \right) * 100$$

$$A00\_eal = \left(\frac{A00\_ealtot}{A00\_etot} \right) * 100$$

$$A01\_eal = \left(\frac{A01\_ealtot}{A01\_etot} \right) * 100$$

$$acs\_eal = \left(\frac{A99\_ealtot + A00\_ealtot + A01\_ealtot}{A99\_etot + A00\_etot + A01\_etot} \right) * 100$$

2.4 Sample Completeness Ratios

The sample completeness ratios are provided for each of the 36 ACS counties. They are not computed at the tract level. We provided a housing unit completeness ratio, and a household population completeness ratio. In addition to the two sample completeness ratios, the numerator and denominator of the ratios for each county are provided. If the denominator of the rate is zero, the rate is shown to be missing on the file.

2.4.1 Census 2000 Sample Completeness Ratios

The Census 2000 sample completeness ratios are based on the comparison of the number of long form sample data defined units and their population weighted by their probabilities of selection to the 100 percent housing unit and household population count. The long form units that met the data criteria to be in sample are multiplied by the BSAM value for the block in which they were enumerated. These units' household population is also multiplied by the BSAM value and compared to the 100 percent count of the household population. The sample completeness ratio formulas are below.

Housing unit sample completeness ratio

cen_hcr = Census 2000 housing unit sample completeness ratio
cen_tothu = Census 2000 total housing units (denominator)
cen_ddhu = Census 2000 BSAM weighted count of long form sample data defined housing units (numerator)

$$cen\_hcr = \frac{cen\_ddhu}{cen\_tothu}$$

Household population sample completeness ratio

cen_pcr = Census 2000 household population sample completeness ratio
cen_totp = Census 2000 total household population (denominator)
cen_lfp = Census 2000 BSAM weighted count of long form household population in sample data defined housing units (numerator)

$$cen\_pcr = \frac{cen\_lfp}{cen\_totp}$$

2.4.2 ACS Single Year and 3-Year Average Sample Completeness Ratios

This is based on the comparison of the initially weighted total housing and household population estimate to the final ACS estimates of total housing and household population. The sample completeness ratio formulas are below.

Housing unit sample completeness ratios

acs_hcr = ACS 3-year average housing unit sample completeness ratio

A99_hcr = ACS housing unit sample completeness ratio for 1999
A99_huc = ACS final total housing units (denominator) for 1999
A99_huw = ACS WSSF weighted total housing units (numerator) for 1999
A00_hcr = ACS housing unit sample completeness ratio for 2000
A00_huc = ACS final total housing units (denominator) for 2000
A00_huw = ACS WSSF weighted total housing units (numerator) for 2000
A01_hcr = ACS housing unit sample completeness ratio for 2001
A01_huc = ACS final total housing units (denominator) for 2001
A01_huw = ACS WSSF weighted total housing units (numerator) for 2001

$$A99\_hcr = \frac{A99\_huw}{A99\_huc}$$

$$A00\_hcr = \frac{A00\_huw}{A00\_huc}$$

$$A01\_hcr = \frac{A01\_huw}{A01\_huc}$$

$$acs\_hcr = \frac{A99\_huw + A00\_huw + A01\_huw}{A99\_huc + A00\_huc + A01\_huc}$$

Household population sample completeness ratios

acs_pcr = ACS 3-year average household population sample completeness ratio
A99_pcr = ACS household population sample completeness ratio for 1999
A99_pc = ACS final household population (denominator) for 1999
A99_pw = ACS WSSF weighted household population (numerator) for 1999
A00_pcr = ACS household population sample completeness ratio for 2000
A00_pc = ACS final household population (denominator) for 2000
A00_pw = ACS WSSF weighted household population (numerator) for 2000
A01_pcr = ACS household population sample completeness ratio for 2001
A01_pc = ACS final household population (denominator) for 2001
A01_pw = ACS WSSF weighted household population (numerator) for 2001

$$A99\_pcr = \frac{A99\_pw}{A99\_pc}$$

$$A00\_pcr = \frac{A00\_pw}{A00\_pc}$$

$$A01\_pcr = \frac{A01\_pw}{A01\_pc}$$

$$acs\_pcr = \frac{A99\_pw + A00\_pw + A01\_pw}{A99\_pc + A00\_pc + A01\_pc}$$

3. STANDARD ERRORS

The standard errors of the Census 2000 and ACS 3-year averages quality measures are described in this section. Section 3.1 describes the calculation of the Census 2000 quality measures standard errors. They were computed using the Census 2000 published design factors. Section 3.2 describes the calculation of the ACS 3-year average quality measures standard errors. For the ACS, the single year estimates were obtained directly via a replication method, and then used to calculate the ACS 3-year average standard errors.

3.1 Standard Errors for Census Quality Measures

To estimate standard errors for the Census 2000 quality measures, we applied Census 2000 long form data variance estimation procedures. The standard errors for the Census 2000 self-response rates, sample unit nonresponse rates, and item allocation rates were calculated as described below.

$$SE(\hat{p}) = DF * \sqrt{\left(\frac{5}{B}\right)\hat{p}\left(100 - \hat{p}\right)}$$

where, B is the base of the percentage or denominator of the rates shown in sections 2.1 through 2.3, and DF is the design factor. For these standard errors, if p was less than 2 percent or greater than 98 percent, then p was set to 2 percent. Also, any of the standard errors greater than 70 were set to 70.

The standard errors for the Census 2000 sample completeness ratios as were calculated as described below.

$\hat{R}$ = sample completeness ratio

$$\hat{R} = \frac{\hat{Y}_1}{\hat{Y}_2}$$

where, $\hat{Y}_2$ is an actual population count, and therefore has no standard error. $\hat{Y}_2$ is the Census 2000 total housing units for the housing unit sample completeness ratio, and the Census 2000 total household population for the household population sample completeness ratio. Therefore, $\hat{Y}_2$ was treated as a constant in the sample completeness ratio standard errors.

$$SE(\hat{R}) = DF * \frac{1}{\hat{Y}_2}\sqrt{5\hat{Y}_1\left(1 - \frac{\hat{Y}_1}{N}\right)}$$

where, N is the size of the publication area or in this case $\hat{Y}_2$, and DF is the design factor.

It should be noted that the formula for $SE(\hat{p})$ and $SE(\hat{Y})$ are derived from the simple random sample variance for a total with a 1-in-6 sampling rate. In addition, the method used to calculate $SE(\hat{R})$ underestimates (overestimates) the standard error if the two items in the ratio are negatively (positively) correlated. For more information on the Census 2000 long form variance procedures, see the Summary File 3 Technical Documentation, released in 2003. This can be found on the U.S. Census Bureau web site at http://www.census.gov/prod/cen2000/doc/sf3.pdf .

3.1.1 Design Factors

The design factor used in the Census 2000 long form variance procedure is the ratio of the estimated standard error to the standard error of a simple random sample. This reflects the effects of the actual sample design and the complex ratio estimation procedure used for Census 2000 (Summary File 3 Technical Documentation, 2003). There are published Census 2000 design factors for a wide range of housing unit and population characteristics (Asiala, 2002). These design factors are available for each state and the United States, and are calculated by the four levels of percent in sample (observed sampling rate). The characteristics for which design factors are published can be found in the Summary File 3 Technical Documentation. The four levels of percent in sample are:

- Level 1 - less than 15 percent
- Level 2 - 15 percent to less than 25 percent
- Level 3 - 25 percent to less than 35 percent
- Level 4 - 35 percent or more

To calculate the standard errors for the Census 2000 long form quality measures, we first identified the appropriate design factors to use in the equation. The first step was to identify the appropriate percent-in-sample level for each of the 36 counties and tracts. The percent in sample for varying geographic levels is available on the Census Bureau web site. Attachment 2 contains a list of the percent in sample levels for each of the 36 counties. For the tract level quality measures, we used the percent in sample of the tract.

The second step was to select the design factor of the most related housing or population characteristics. There aren't directly corresponding published designed factors for all of the quality measures. So, we determined the design factor to use in the standard error calculation by:

- Identifying housing unit/population characteristic with published design factors that correlate to the quality measure.

- Identifying the correlated housing unit/population characteristic with the largest published design factor for each state, and applying this design factor to the quality measure values for the counties and tracts that lie within a state. Using the largest published design factor provided a conservative standard error estimate.

Attachment 3 contains a list of the quality measures and the housing or population characteristic group design factor used to calculate standard error for the quality measures. The national and state design factors can be found in chapter 8 of the Summary File 3 Technical Documentation.

3.2 Standard Errors for ACS Quality Measures

For the ACS quality measures, the single year quality measures and standard errors were computed first. That is, the 1999, 2000, and 2001 quality measures with their associated standard errors were computed separately first. Then they were combined to produce the 3-year average quality measure and standard error. The standard errors for the single year quality measures were obtained directly via a replication method. The standard errors (SE) for the 3-year average quality measures were then computed as follows. Michael Starsinic of the U.S. Census Bureau provided the information in this section.

Let $Rate_{Year} = \frac{N_{Year}}{D_{Year}}$, where N stands for numerator and D stands for denominator.

$N_{3yr} = N_{1999} + N_{2000} + N_{2001}$ and $D_{3yr} = D_{1999} + D_{2000} + D_{2001}$

$$Rate_{3yr} = \frac{N_{3yr}}{D_{3yr}}$$

$$\left(SE\left(N_{3yr}\right)\right)^2 = \left(SE\left(N_{1999}\right)\right)^2 + \left(SE\left(N_{2000}\right)\right)^2 + \left(SE\left(N_{2001}\right)\right)^2$$

$$\left(SE\left(D_{3yr}\right)\right)^2 = \left(SE\left(D_{1999}\right)\right)^2 + \left(SE\left(D_{2000}\right)\right)^2 + \left(SE\left(D_{2001}\right)\right)^2$$

$$SE\left(Rate_{3yr}\right) = \frac{1}{D_{3yr}}\sqrt{\left(SE\left(N_{3yr}\right)\right)^2 + \left(Rate_{3yr}\right)^2 \times \left(SE\left(D_{3yr}\right)\right)^2}$$

If N_{Year}=0 or D_{Year}=0, then their standard error was calculated as zero using the replication method. Also, a nonzero estimate sometimes had a zero standard error calculated using the replication weights. What happened in these cases? We used the following approximation:

$$\left(SE\left(D_{Year}\right)\right)^2 = 400 \times AvgWeight_{County}$$

where the average weight is the maximum of the average person and average household final weights for observations in the county for that year.

When several of the single year estimates have been approximated this way, the standard error of the three-year average rate can be quite large. The files have been set up to allow you to handle these SEs differently if you choose to do so. The quality measure source data files retain the calculated zero SEs. The three-year average standard errors

incorporate the approximation above for zero SEs, and the quality measure source data files include the average weights for the three years.

If $D_{3yr} = 0$, meaning there were no observations in the denominator for any of the three years, the standard error for the three year average rate is set to missing.

If the value calculated for $SE(Rate_{3yr})$ was greater than 70, the standard error of the three-year average rate was set to 70.

3.3 Standard Errors for the Differences between the ACS and Census Quality Measures

The standard errors for the differences between the ACS and Census quality measures were calculated as follows.

$$SE(difference) = \sqrt{SE(Rate_{ACS3yr})^2 + SE(Rate_{Census})^2}$$

where difference = $Rate_{ACS3yr}$ - $Rate_{Census}$

It should be noted that the standard error of the difference does not take into account the covariance between the ACS quality measure and the Census quality measure. So, this method overestimates the standard error of the difference.

4.0 REFERENCES

Asiala, Mark and Dawn Haines, *Census 2000 Long Form - Data Groupings for Generalized Design Factors*, DSSD CENSUS PROCEDURES AND OPERATIONS MEMORANDUM SERIES #LL-11, Bureau of the Census, September 16, 2002.

Bureau of the Census, *Summary File 3 Technical Documentation, 2000 Census of Population and Housing*, http://www.census.gov/prod/cen2000/doc/sf3.pdf, February 2003.

ATTACHMENT 1
Comparable Census and ACS Items

The following table contains the population and housing items for which an item allocation rate is calculated. There are 54 comparable population items, 29 comparable housing unit items for occupied units, and 12 comparable housing unit items for vacant units. The bolded Item Descriptions in the table below are the 12 comparable items for vacant housing units. Allocations for any item on the census or ACS questionnaire are equal to the sum of the item's Edit/Allocation Flag ("F" variable) values greater than 3. The Census Item information can be found in the SCEF documentation. The ACS Item information can be found the ACS data dictionary document.

Item Description	Census Item	ASC Item
	Population Items	
Relationship	**FREL** QREL EDIT/ALLOCATION FLAG 0 = As reported from code box 1 = As reported from write-in 2 = Value changed for household consistency 3 = Housing unit person is on a GQ form or Person is in a GQ 4 = Allocated from hot deck 5 = Allocated due to consistency check 7 = Substituted (QDDP=2) **QREL** 01 = Householder 02 = Husband/wife 03 = Natural-born son/daughter 04 = Adopted son/daughter 05 = Stepson/stepdaughter 06 = Brother/sister 07 = Father/mother 08 = Grandchild 09 = Parent-in-law 10 = Son-in-law/daughter-in-law 11 = Other relative 12 = Brother-in-law/sister-in-law	**FREL** REL ALLOCATION FLAG 0 = Not allocated 1 = Assigned for hh consistency (no data) 2 = Assigned for hh consistency (inconsistent data) 4 = Allocated from hot deck 5 = Allocated from roster **REL** 0 = Reference person 1 = Husband/wife 2 = Son/daughter 3 = Brother/sister 4 = Father/mother 5 = Grandchild 6 = In-law 7 = Other relative 8 = Roomer/boarder 9 = Housemate/roommate 10 = Unmarried partner 11 = Foster child 12 = Other nonrelative

Item Description	Census Item	ASC Item
	13 = Nephew/niece 14 = Grandparent 15 = Uncle/aunt 16 = Cousin 17 = Roomer/boarder 18 = Housemate/roommate 19 = Unmarried partner 20 = Foster child 21 = Other nonrelative 22 = Institutional GQ person 23 = Noninstitutional GQ person	
Sex	**FSEX** QSEX EDIT/ALLOCATION FLAG 0 = As reported 1 = From first name 2 = Value edited for household consistency 4 = Allocated from hot deck 5 = Allocated due to consistency check 7 = Substituted (QDDP=2) **QSEX** 1 = Male 2 = Female	**FSEX** RSEX ALLOCATION FLAG 0 = As reported 1 = From first name 4 = Allocated from hot deck 5 = Allocated from consistency check **SEX** 1 = Male 2 = Female
Age	**FAGE** QAGE EDIT/ALLOCATION FLAG 0 = Consistent as reported 1 = Age only 2 = Date of birth only 3 = Inconsistent age and date of birth 4 = Allocated from hot deck 7 = Substituted (QDDP=2) **QAGE** 00-115 = Age	**FAGE** AGE ALLOCATION FLAG 0 = Not allocated 1 = Changed to age 0 2 = Computed age chosen over reported age 3 = Inconsistent age and date of birth 4 = Allocated age (reported out of range) 5 = Allocated age (blank) 6 = Allocated age (inconsistent with education) 7 = Allocated age (inconsistent with other variables) **AGE** 0..115 = Years

Item Description	Census Item	ASC Item
Hispanic	**FSPAN** HISPANIC ORIGIN (QSPAN) EDIT/ALLOCATION FLAG 0 = 1 reported origin 2 = Multiple response given a unique Hispanic or Non-Hispanic code 3 = Assign Hispanic from race code 4 = Allocated from within household 5 = Allocated from hot deck (surname used) 6 = Allocated from hot deck (surname not used) 7 = Substituted (QDDP=2) **QSPAN** Hispanic Origin code	**FHIS** HIS ALLOCATION FLAG 0 = As reported or Not in universe 1 = Assigned Hispanic from race code 2 = Multiple response given a unique Hispanic or non-Hispanic code 4 = Allocated from within household 5 = Allocated from hot deck (surname used) 6 = Allocated from hot deck (surname not used) **HIS** 001..999 = Hispanic Origin Code
Race	**FRACE** RACE (QRACE1-QRACE8) EDIT/ALLOCATION FLAG 0 = As reported 1 = Code changed through consistency edit 3 = Classified from race response in Hispanic question 4 = Allocated from within household 5 = Allocated from hot deck 7 = Substituted (QDDP=2) **QRACE1** ANN = See the race code list (ANN is an alphanumeric character followed by two numeric characters)	**FRAC** RCC1 ALLOCATION FLAG 0 = As reported or Not in universe 1 = Assigned race from Hispanic origin code 4 = Allocated from within household 5 = Allocated from hot deck **RCC1** 100..999, A01..R99 = Detailed First Race Code
Marital Status	**FMS** QMS EDIT/ALLOCATION FLAG 0 = Not allocated 2 = Value assigned by internal consistency check 4 = Allocated by hot deck **QMS** 1 = Now married 2 = Widowed 3 = Divorced 4 = Separated 5 = Never married	**FMAR** MAR ALLOCATION FLAG 0 = Not allocated 1 = Assigned for hh consistency (no data) 2 = Assigned for hh consistency (inconsistent data) 4 = Allocated from hot deck 5 = Allocated from roster **MAR** 1 = Married 2 = Widowed 3 = Divorced

Item Description	Census Item	ASC Item
		4 = Separated 5 = Never married
School Enrollment	**FATTEND** QATTEND EDIT/ALLOCATION FLAG 0 = Not changed 1 = Plugged No 2 = Plugged No from Yes and/or grade filled 4 = Allocated from matrix **QATTEND** ATTENDED SCHOOL SINCE FEBRUARY 1, 2000 0 = Not in universe (less than 3 years old) 1 = No, has not attended since Feb. 1 2 = Yes, public school or college 3 = Yes, private school or college	**FSCH** SCH ALLOCATION FLAG 0 = Not changed 1 = Plugged no 2 = Plugged no from yes 4 = Allocated from matrix 5 = Type of school allocated when enrolled **SCH** Missing = Not in universe 1 = No, has not attended in the last 3 months 2 = Yes, public school or college 3 = Yes, private school or college
Grade attending	**FGRADE** QGRADE EDIT/ALLOCATION FLAG 0 = Not changed 1 = From filled to not in universe 4 = Allocated from matrix 5 = Blanked and allocated because of AGE 6 = Blanked and allocated because of inconsistency with QHIGH **QGRADE** 0 = Not in universe (less than 3 years old or QATTEND=1) 1 = Nursery school, preschool 2 = Kindergarten 3 = Grade 1 to grade 4 4 = Grade 5 to grade 8 5 = Grade 9 to grade 12 6 = College undergraduate 7 = Graduate or professional school	**FSCHG** SCHG ALLOCATION FLAG 0 = Not changed 1 = From filled to NIU 4 = Allocated from matrix 5 = Blanked and allocated because of AGE 6 = Blanked and allocated because of inconsistency with SCHL **SCHG** missing = Not in universe 1 = Nursery school/preschool 2 = Kindergarten 3 = Grade 1 to grade 4 4 = Grade 5 to grade 8 5 = Grade 9 to grade 12 6 = College undergraduate 7 = Graduate or professional school

Item Description	Census Item	ASC Item
Educational attainment	**FHIGH** QHIGH ALLOCATION FLAG 0 = Not changed 4 = Allocated from matrix 5 = Blanked and allocated because of AGE 6 = Blanked and allocated because of inconsistency with QGRADE **QHIGH** 00 = Not in universe (less than 3 years old) 01 = No schooling completed 02 = Nursery school to 4th grade 03 = 5th grade or 6th grade 04 = 7th grade or 8th grade 05 = 9th grade 06 = 10th grade 07 = 11th grade 08 = 12th grade, no diploma 09 = High school graduate 10 = Some college, but less than 1 year 11 = 1 or more years of college, no degree 12 = Associate degree 13 = Bachelor's degree 14 = Master's degree 15 = Professional degree 16 = Doctorate degree	**FSCHL** SCHL ALLOCATION FLAG 0 = Not changed 4 = Allocated from matrix 5 = Blanked and allocated because of AGE 6 = Blanked and allocated because of inconsistency with SCHG **SCHL** SAS missing = Not in universe 1 = No schooling completed 2 = Nursery school to 4th grade 3 = 5th grade or 6th grade 4 = 7th grade or 8th grade 5 = 9th grade 6 = 10th grade 7 = 11th grade 8 = 12th grade, no diploma 9 = High school graduate 10 = Some college, but less than 1 year 11 = 1+ years of college, no degree 12 = Associate degree 13 = Bachelor's degree 14 = Master's degree 15 = Professional degree 16 = Doctorate degree
Non-English language	**FSPEAK** QSPEAK EDIT/ALLOCATION FLAG 0 = Not changed 1 = Plugged from blank because of language entry 2 = Changed because of language entry 4 = Allocated from household member 5 = Allocated from hot deck matrix 6 = Plugged from household member	**FLANX** LANX ALLOCATION FLAG 0=Not allocated 1=Plugged from blank because of language entry 2=Changed because of language entry 3=Plugged from household member 4=Allocated from household member 5=Allocated from hot deck matrix

Item Description	Census Item	ASC Item
	QSPEAK blank = Not in universe (less than 5 years old) 1 = Yes 2 = No	**LANX** SAS missing=Not in universe 1 = Yes 2 = No, only English
Language Spoken	**FLANGCODE** QLANGCODE EDIT/ALLOCATION FLAG 0 = Not changed 1 = Changed to not in universe because not legitimate language 2 = From person characteristics 4 = Allocated from race (matrix 7) or (matrix 6) 5 = Allocated from household member 6 = Allocated from ancestry (matrix 8) 7 = Allocated from foreign born (matrix 9) **QLANGCODE** blank = Not in universe (less than 5 years old or QSPEAK=2) 601-994 = Language code 998 = Specified language not elsewhere classified 999 = Entry not specific	**FLAN** LAN ALLOCATION FLAG 0=Not allocated 1=Changed to NIU because not legitimate language 4=Allocated from matrix 6 (Indian) or matrix 7 (race) 5=Allocated from household member 6=Allocated from matrix 8 (ancestry) 7=Allocated from matrix 9-10 (foreign born) **LAN** missing=Not in universe 601..982=Language code (See Appendix A for details) 998=Specified language NEC 999=Entry not specific
English Ability	**FENGABIL** QENGABIL ALLOCATION FLAG 0 = Not allocated 4 = Allocated from hot deck (matrix 10) **QENGABIL** "HOW WELL DO YOU SPEAK ENGLISH?" blank = Not in universe (less than 5 years old or QSPEAK=2) 1 = Very well 2 = Well 3 = Not well 4 = Not at all	**FENG** ENG ALLOCATION FLAG 0= Not allocated 4 = Allocated from hot deck matrix **ENG** missing=Not in universe 1=Very well 2=Well 3=Not well 4=Not at all

Item Description	Census Item	ASC Item
Place of Birth Code	**FPOB** PLACE OF BIRTH ALLOCATION FLAG 0 = Not changed 4 = Assigned code of other family member 5 = Assigned State of current residence 6 = Assigned State or foreign country of previous residence 7 = Allocated code from hot deck matrix **QPOBST** 001-056 = FIPS codes for U.S. States 060-095 = Specific U.S. Island Areas (072=Puerto Rico) 100-554 = Foreign countries, regions, or "at sea"	**FPOB** POB ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 5 = Assigned state of current residence 6 = Assigned state or foreign country of previous residence 7 = Allocated from hot-deck matrix **POB** 001-056 =FIPS codes for U.S. States 060-095 =Specific U.S. Outlying Areas 100-553 =Foreign countries, regions 554 = At sea
Citizenship status	**FCITIZEN** QCITIZEN EDIT/ALLOCATION FLAG 0 = As reported or Not in universe 1 = Changed based on Place of birth 2 = Changed based on household relationship information 4 = Joint allocation with Year of entry 5 = Allocated **QCITIZEN** "ARE YOU A CITIZEN OF THE US?" 1 = Yes, born in the United States 2 = Yes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas 3 = Yes, born abroad of American parent or parents 4 = Yes, U.S. citizen by naturalization 5 = No, not a citizen of the United States	**FCIT** CIT ALLOCATION FLAG 0 = As reported or Not in universe 1 = Changed based on Place of birth 2 = Changed based on household relationship information 4 = Joint allocation with Year of entry 5 = Allocated **CIT** 1 = Yes, born in the US 2 = Yes, born in Puerto Rico, etc. 3 = Yes, born abroad of American parent(s) 4 = Yes, naturalized 5 = Not a citizen
Year of Entry	**FYR2US** QYR2US ALLOCATION FLAG 0 = As reported or Not in universe 4 = Blank value allocated 5 = Inappropriate value allocated 6 = Joint allocation with Citizenship	**FYOE** YOE ALLOCATION FLAG 0 = As reported or Not in universe 4 = Blank value allocated 5 = Inappropriate value allocated 6 = Joint allocation with Citizenship

Item Description	Census Item	ASC Item
	QYR2US "WHAT YEAR DID YOU COME TO LIVE IN THE U.S.?" blank = Not in universe (QCITIZEN=1) 1885-2000 = Year of Entry	**YOE** missing = Not in universe RDATE(yyyy)-116..RDATE(yyyy) = Year
Mobility Status	**FMIG** QMIG EDIT/ALLOCATION FLAG 0 = Not changed or not in universe 1 = Assigned mobility status based on MIGST 4 = Assigned code of other family member 7 = Allocated code from hot deck matrix **QMIG** "DID YOU LIVE HERE FIVE YEARS AGO?" 0 = Not in universe (Under 5 years old) 1 = Yes, same house 2 = No, outside the United States (outside Puerto Rico or the United States if Puerto Rico is the state of residence) 3 = No, different house in the United States (different house in Puerto Rico or the United States if Puerto Rico is the state of residence)	**FMIG** MIG ALLOCATION FLAG 0 = Not changed or not in universe 1 = Assigned 2 = Assigned based on year moved in 4 = Assigned response of other family member 7 = Allocated from hot deck matrix **MIG** missing = Not in universe 1 = Yes, same house (nonmovers) 2 = No, outside the United States (movers) 3 = No, different house in the US (movers)
Migration – state	**FMIGST** QMIGST ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 5 = Assigned place of birth 7 = Allocated code from hot deck matrix **QMIGST** 000 = Not in universe (under 5 or nonmover) 001-056 = FIPS State code 060-095 = FIPS Outlying Area code 100-554 = Foreign country or at sea	**FMIGS** MIGS ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 5 = Assigned place of birth 7 = Allocated from hot deck matrix **MIGS** missing = Not in universe 001..554 = FIPS state/country code

Item Description	Census Item	ASC Item
Migration – county	**FMIGCO** QMIGCO ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 5 = Assigned place of birth 7 = Allocated code from hot deck matrix **QMIGCO** 000 = Not in universe (under 5, nonmover, or moved from abroad) 001-998 = FIPS County code	**FMIGC** MIGC ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 7 = Allocated from hot deck matrix **MIGC** missing = Not in universe 000 = Abroad/at sea 001..999 = FIPS county code
Migration – place	**FMIGPL** QMIGPL ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 5 = Assigned place of birth 7 = Allocated code from hot deck matrix **QMIGPL** LIVED 5 YEARS AGO PLACE CODE 0000 = Not in universe (under 5, nonmover, or moved from abroad) 0001-9998 = Census place code 9999 = Not in a place	**FMIGP** MIGP ALLOCATION FLAG 0 = Not changed or not in universe 4 = Assigned code of other family member 7 = Allocated from hot deck matrix **MIGP** missing = Not in universe 0000 = Abroad/at sea 0001..9998 = Place code 9999 = Not in a place
Vision or Hearing Difficulty	**FSENSE** QSENSE ALLOCATION FLAG 0 = Not allocated 4 = Allocated **QSENSE** HAVE LONG-LASTING VISION OR HEARING IMPAIRMENT blank = Not in universe (less than 5 years old) 1 = Yes 2 = No	**FDEYE** DEYE ALLOCATION FLAG 0 = Not allocated 4 = Allocated **DEYE** missing = Not in universe 1 = Yes 2 = No

Item Description	Census Item	ASC Item
Physical Difficulty	**FLMOB** QLMOB ALLOCATION FLAG 0 = Not allocated 4 = Allocated **QLMOB** HAVE LONG-LASTING LIMITED MOBILITY (E.G., WALKING, LIFTING) blank = Not in universe (less than 5 years old) 1 = Yes 2 = No	**FDPHY** DPHY ALLOCATION FLAG 0 = Not allocated 4 = Allocated **DPHY** missing = Not in universe 1 = Yes 2 = No
Mental Difficulty	**FABMEN** QABMEN ALLOCATION FLAG 0 = Not allocated 4 = Allocated **QABMEN** DIFFICULTY IN ABILITY TO PERFORM MENTAL TASKS (E.G.,LEARNING, REMEMBERING) blank = Not in universe (less than 5 years old) 1 = Yes 2 = No	**FDREM** DREM ALLOCATION FLAG 0 = Not allocated 4 = Allocated **DREM** missing = Not in universe 1 = Yes 2 = No
Self-care Difficulty	**FABPHYS** QABPHYS ALLOCATION FLAG 0 = Not allocated 4 = Allocated **QABPHYS** DIFFICULTY IN ABILITY TO DRESS, BATHE, MOVE ABOUT AT HOME blank = Not in universe (less than 5 years old) 1 = Yes 2 = No	**FDDRS** DDRS ALLOCATION FLAG 0 = Not allocated 4 = Allocated **DDRS** missing = Not in universe 1 = Yes 2 = No

Item Description	Census Item	ASC Item
Difficulty Going Out	**FABGO** QABGO ALLOCATION FLAG 0 = Not allocated 4 = Allocated **QABGO** DIFFICULTY IN ABILITY TO GO OUTSIDE HOME ALONE (E.G., TO SHOP) blank = Not in universe (less than 16 years old) 1 = Yes 2 = No	**FDOUT** DOUT ALLOCATION FLAG 0 = Not allocated 4 = Allocated **DOUT** missing = Not in universe 1 = Yes 2 = No
Difficulty Working at a Job	**FABWORK** QABWORK ALLOCATION FLAG 0 = Not allocated 4 = Allocated **QABWORK** DIFFICULTY IN ABILITY TO WORK AT A JOB OR BUSINESS blank = Not in universe (less than 16 years old) 1 = Yes 2 = No	**FDWRK** DWRK ALLOCATION FLAG 0 = Not allocated 4 = Allocated **DWRK** missing = Not in universe 1 = Yes 2 = No
Grandchildren living at home	**FGRANDC** QGRANDC ALLOCATION FLAG 0 = Not allocated 5 = Allocated for consistency **QGRANDC** 0 = Not in universe (person under age 15) 1 = Yes 2 = No	**FGCL** GCL ALLOCATION FLAG 0 = Not allocated 5 = Allocated **GCL** missing = Not in universe 1 = Yes 2 = No
Responsible for Grandchildren	**FRESPNSBL** QRESPNSBL ALLOCATION FLAG 0 = Not allocated 4 = Allocated by hot deck 5 = Allocated for consistency	**FGCR** GCR ALLOCATION FLAG 0 = Not allocated 4 = Allocated by hot deck

Item Description	Census Item	ASC Item
	QRESPNSBL 0 = Not in universe (person under age 15 or QGRANDC=2) 1 = Yes 2 = No	**GCR** missing = Not in universe 1 = Yes 2 = No
Months Responsible for Grandchildren	**FHOWLONG** QHOWLONG ALLOCATION FLAG 0 = Not allocated 4 = Allocated by hot deck 5 = Allocated for consistency **QHOWLONG** 0 = Not in universe (person under 15, QGRANDC=2, or QRESPNSBL=2) 1 = Less than 6 months 2 = 6 to 11 months 3 = 1 or 2 years 4 = 3 or 4 years 5 = 5 years or more	**FGCM** GCM ALLOCATION FLAG 0 = Not allocated 4 = Allocated by hotdeck **GCM** missing = Not in universe 1 = Less than 6 months 2 = 6 to 11 months 3 = 1 or 2 years 4 = 3 or 4 years 5 = 5 years or more
Served in Armed Forces	**FMILAD** QMILAD EDIT/ALLOCATION FLAG 0 = Not changed 1 = Changed in edit 4 = Allocated **QMILAD** EVER SERVED ON ACTIVE DUTY IN U.S. ARMED FORCES 0 = Not in universe (age<17) 1 = Yes, now on active duty 2 = Yes, on active duty in the past, but not now 3 = No, training for Reserves or National Guard only 4 = No active duty service	**FMIL** MIL ALLOCATION FLAG 0 = Not changed 1 = Changed in edit 4 = Allocated by MMIL-2 **MIL** missing = Not in universe 1 = Yes, now on active duty 2 = Yes, on active duty in past, but not now 3 = No, training for Reserves/National Guard only 4 = No active duty service

Item Description	Census Item	ASC Item
Periods of Military Service	**FMIL** QMIL1-QMIL9 EDIT/ALLOCATION FLAG 0 = Not changed 1 = Changed in edit 4 = Allocated **QMIL1** ON ACTIVE DUTY: APRIL 1995 OR LATER 0 = Did not serve in this period or Not in universe (age<17) 1 = Served in this period Note: There are nine periods of military service flags QMIL1 – QMIL9. They each have the same structure as QMIL1, but reference different periods. The periods are listed below. The individual periods of military service are not listed. AUGUST 1990 TO MARCH 1995 (INCLUDING PERSIAN GULF WAR) SEPTEMBER 1980 TO JULY 1990 MAY 1975 TO AUGUST 1980 THE VIETNAM ERA (AUGUST 1964 TO APRIL 1975) FEBRUARY 1955 TO JULY 1964 THE KOREAN CONFLICT (JUNE 1950 TO JANUARY 1955) WORLD WAR II (SEPTEMBER 1940 TO JULY 1947) ANY OTHER TIME	**FMILP** MLP ALLOCATION FLAG 0 = Not changed 1 = Changed in edit 5 = Allocated by MMIL-1 6 = Allocated by MMIL-3 **MLPA** missing = Not in universe 0 = Did not serve in this period 1 = Served in this period Note: There are nine periods of military service flags MLPA – MLPI. They each have the same structure as MLPA, and reference the same periods as the Census.
Years of Active Duty	**FMILTOT** QMILTOT EDIT/ALLOCATION FLAG 0 = Not changed 1 = Changed in edit 4 = Allocated **QMILTOT** 0 = Not in universe (age<17) 1 = Less than 2 years 2 = 2 years or more	**FMILY** MILY ALLOCATION FLAG 0 = Not changed 1 = Changed in edit 5 = Allocated by MMIL-1 6 = Allocated by MMIL-3 **MILY** missing = Not in universe 1 = Less than 2 years 2 = 2 years or more

Item Description	Census Item	ASC Item
Employment Status Recode	**FESR** ESR ALLOCATION FLAG 0 = Not changed 4 = Allocated by MESRB 5 = Allocated by MESRA **ESR** 0 = Not in universe (less than 16 years old) 1 = Employed, at work 2 = Employed, with a job but not at work 3 = Unemployed 4 = Armed Forces, at work 5 = Armed Forces, with a job but not at work 6 = Not in labor force	**FESR** ESR ALLOCATION FLAG 0 = Not changed 1 = ESR component (on layoff) edited 4 = Allocated by MESRB 5 = Allocated by MESRA **ESR** SAS missing = Not in universe (less than 16 yrs old) 1 = Employed, at work 2 = Employed, with a job but not at work 3 = Unemployed 4 = Armed Forces, at work 5 = Armed Forces, with a job but not at work 6 = Not in labor force
Place or Work – State	**FPOWST** QPOWST EDIT/ALLOCATION FLAG 0 = Not allocated (as reported and not in universe) 1 = Edit reason - POW geography set based on residence for "Worked at home" 4 = Allocated from hot deck 5 = Allocated from cold deck **QPOWST** 000 = Not in universe (ESR=0,2,3,5, or 6) 001-056 = U.S. state (FIPS code) 060-071 = U.S. Outlying Areas 072 = Puerto Rico 073-095 = U.S. Outlying Areas 096 = U.S. Outlying Area (Area not specified) 100-553 = Foreign country 554 = At sea 555 = Abroad, country not specified	**FPOWS** POWS ALLOCATION FLAG 0 = Not allocated 1 = Worked at home 4 = Allocated from hot deck 5 = Allocated from cold deck **POWS** missing = Not in universe 001..555 = FIPS state/country code

Item Description	Census Item	ASC Item
Place of Work – county	**FPOWCO** QPOWCO EDIT/ALLOCATION FLAG 0 = Not allocated (as reported and not in universe) 1 = Edit reason - POW geography set based on residence for "Worked at home" 4 = Allocated from hot deck 5 = Allocated from cold deck **QPOWCO** 000 = Not in universe (ESR=0,2,3,5, or 6; or QPOWST is not 001-056 or 072) 001-998 = FIPS County code	**FPOWC** POWC ALLOCATION FLAG 0 = Not allocated 1 = Worked at home 4 = Allocated from hot deck 5 = Allocated from cold deck **POWC** missing = Not in universe 000 = Abroad/at sea 001..999 = FIPS county code
Place of Work – place	**FPOWPL** QPOWPL EDIT/ALLOCATION FLAG 0 = Not allocated (as reported and not in universe) 1 = Edit reason - POW geography set based on residence for "Worked at home" 4 = Allocated from hot deck 5 = Allocated from cold deck **QPOWPL** 0000 = Not in universe (ESR=0,2,3,5, or 6; or POWST is not 001-056 or 072) 0001-9998 = Census place code 9999 = Not in a place	**FPOWP** POWP ALLOCATION FLAG 0 = Not allocated 1 = Worked at home 4 = Allocated from hot deck 5 = Allocated from cold deck **POWP** missing = Not universe 0000 = Abroad/at sea 0001..9998 = Place code 9999 = Not in a place

Item Description	Census Item	ASC Item
Transportation to Work	**FCOMMUTE** QCOMMUTE EDIT/ALLOCATION FLAG 0 = As reported 1 = Edit–QCOMMUTE assigned to 0 (not in universe) based on ESR 2 = Edit–QCOMMUTE assigned to 1 (car, truck, or van) from QCARPOOL 4 = QCOMMUTE allocated from MCOMMUTE **QCOMMUTE** (HOW USUALLY GOT TO WORK LAST WEEK) 00 = Not in universe (ESR=0,2,3,5, or 6) 01 = Car, truck, or van 02 = Bus or trolley bus 03 = Streetcar or trolley car (Publico in Puerto Rico) 04 = Subway or elevated 05 = Railroad 06 = Ferryboat 07 = Taxicab 08 = Motorcycle 09 = Bicycle 10 = Walked 11 = Worked at home 12 = Other method	**FJWTR** JWTR ALLOCATION FLAG 0 = As reported 1 = Assigned to SAS missing based on ESR 2 = Assigned to 1 based on JWRI 4 = Allocated **JWTR** missing = Not in universe 1 = Car/truck/van 2 = Bus or trolley bus 3 = Streetcar or trolley car 4 = Subway or elevated 5 = Railroad 6 = Ferry boat 7 = Taxicab 8 = Motorcycle 9 = Bicycle 10 = Walked 11 = Worked at home 12 = Other
Carpool Size	**FCARPOOL** QCARPOOL EDIT/ALLOCATION FLAG 0 = As reported 1 = Edit–QCARPOOL assigned to 0 (not in universe) based on ESR 2 = Edit–QCARPOOL assigned to 0 (not in universe) based on QCOMMUTE 4 = QCARPOOL allocated from MCARPOOL **QCARPOOL** 0 = Not in universe (ESR=0,2,3,5, or 6 or QCOMMUTE=2- 12) 1 = Drove alone 2 = 2 people	**FJWRI** JWRI ALLOCATION FLAG 0 = As reported 1 = Assigned to SAS missing based on ESR 2 = Assigned to SAS missing based on JWTR 3 = Assigned to 16 (maximum value) 4 = Allocated **JWRI** missing = Not in universe 01 = Drove alone 02 = 2 people ...

Item Description	Census Item	ASC Item
	3 = 3 people 4 = 4 people 5 = 5 or 6 people 6 = 7 or more people	15 = 15 people 16 = 16 or more people
Time of Departure	**FLEAVETM** QLEAVETM EDIT/ALLOCATION FLAG 0 = As reported 1 = Edit–QLEAVETM assigned to 0000 (Not in universe) based on ESR (Employment Status Recode) 2 = Edit–QLEAVETM assigned to 0000 (Not in universe) based on QCOMMUTE=11 (Worked at home) 3 = Edit–QLEAVETM changed based on keying/capture right-justification and blank fill of field 4 = Allocated from MLEAVE1 (a.m./p.m. allocated when departure time is known) 5 = Allocated from MLEAVE2 (Departure time allocated when a.m./p.m. is known) 6 = Allocated from MLEAVE2 (Departure time allocated when a.m./p.m. not known) **QLEAVETM** 0000 = Not in universe (ESR=0,2,3,5, or 6 or QCOMMUTE=11 (WORKED AT HOME)) 0001-2400 = Time (hour and minute) of departure for work where 2400=midnight	**FJWD** JWD ALLOCATION FLAG 0 = As reported 1 = Assigned to Not in universe based on ESR 2 = Assigned to Not in universe based on Worked at home 4 = Allocated UJWAM from MJWD_1 5 = Allocated JWD from MJWD_2 (a.m./p.m. known) 6 = Allocated JWD from MJWD_2 (a.m./p.m. not known) **JWD** missing = Not in universe 0001 - 2400 = Time (hour and minute) of departure for work
Commuting Time	**FCTIME** QCTIME EDIT/ALLOCATION FLAG 0 = As reported 1 = Edit–QCTIME assigned to 000 (not in universe) based on ESR 2 = Edit–QCTIME assigned to 000 (not in universe) based on QCOMMUTE=11 (worked at home) 3 = Edit–QCTIME assigned to 200 (200 or more minutes) as the maximum allowed output value 4 = Allocated	**FJWMN** JWMN ALLOCATION FLAG 0 = As reported 1 = Assigned to Not in universe based on ESR 2 = Assigned to Not in universe based on Worked at home 3 = Assigned to 200 (maximum value) 4 = Allocated

Item Description	Census Item	ASC Item
	QCTIME 000 = Not in universe (ESR=0,2,3,5, or 6 or QCOMMUTE=11 (worked at home)) 001-199 = 1 to 199 minutes to get to work 200 = 200 minutes or more to get to work	**JWMN** missing = Not in Universe 001 - 199 = 1 to 199 minutes to get to work 200 = 200 minutes or more to get to work
When Last Worked	**FLASTWK** QLASTWK EDIT/ALLOCATION FLAG 0 = Not changed 1 = Changed by consistency edit 4 = Allocated by Matrix 1 in the join economic edit 5 = Allocated by Matrices 2-9 in the joint economic edit **QLASTWK** 0 = Not in universe (Less than 16 years old) 1 = 1995 to 2000 2 = 1994 or earlier, or never worked	**FWKL** WKL ALLOCATION FLAG 0 = Not changed 1 = Assigned by skip pattern 2 = Changed by consistency edit 3 = Assigned by allocated ESR 4 = Allocated from MJ1 (detailed) 5 = Allocated from MJ1 (collapsed) 6 = Allocated from MJ2-8 (detailed) 7 = Allocated from MJ2-8 (collapsed) 8 = Needs allocation 9 = "Not past 12 months" needs allocation **WKL** missing = Not in universe 1 = Within past 12 months 2 = 1-5 years ago 3 = Over 5 years ago or never worked
Industry	**FIND** QIND EDIT/ALLOCATION FLAG 0 = Not in universe or as reported 1 = Assigned from Reported Code in Stage 1 (before any sample variable has been allocated) 2 = Assigned from Reported code in Stage 2 (just before income is edited) 3 = Assigned from Reported Code in Stage 3 (after Joint) 4 = Allocated from Joint Matrix 1, (detailed) 5 = Allocated from Joint Matrix 1, (collapsed) 6 = Allocated from Joint Matrices 10-13, (detailed) 7 = Allocated from Joint Matrices 10-13, (collapsed)	**FIND** IND ALLOCATION FLAG 0 = As reported or not in universe 1 = Assigned from reported code in Stage 1 2 = Assigned from reported code in Stage 2 3 = Assigned from reported code in Stage 3 (after JOINT) 4 = Allocated from Joint Matrix 1 (detailed) 5 = Allocated from Joint Matrix 1 (collapsed) 6 = Allocated from Joint Matrices 10-13 (detailed) 7 = Allocated from Joint Matrices 10-13 (collapsed)

Item Description	Census Item	ASC Item
	QIND 000 = Not in universe (Less than 16 years old 01-997 = Legal 2000 industry code	**IND** missing = Not in universe industry code
Occupation	**FOCC** QOCC EDIT/ALLOCATION FLAG 0 = Not in universe or as reported 1 = Assigned from Reported Code in Stage 1 (before any sample variable has been allocated) 2 = Assigned from Reported code in Stage 2 (just before income is edited) 3 = Assigned from Reported Code in Stage 3 (after Joint) 4 = Allocated from Joint Matrix 1, (detailed) 5 = Allocated from Joint Matrix 1, (collapsed) 6 = Allocated from Joint Matrices 10-13, (detailed) 7 = Allocated from Joint Matrices 10-13, (collapsed) **QOCC** 000 = Not in universe (Less than 16 years old or did not work in the last 5 years) 001-997 = Legal 2000 occupation code	**FOCC** OCC ALLOCATION FLAG 0 = As reported or not in universe 1 = Assigned from reported code in Stage 1 2 = Assigned from reported code in Stage 2 3 = Assigned from reported code in Stage 3 (after JOINT) 4 = Allocated from Joint Matrix 1 (detailed) 5 = Allocated from Joint Matrix 1 (collapsed) 6 = Allocated from Joint Matrices 10-13 (detailed) 7 = Allocated from Joint Matrices 10-13 (collapsed) **OCC** missing = Not in universe occupation code
Class of Worker	**FCOW** QCOW EDIT/ALLOCATION FLAG 0 = Not in universe or as reported 1 = Assigned from Reported Code in Stage 1 (before any sample variable has been allocated) 2 = Assigned from Reported code in Stage 2 (just before income is edited) 3 = Assigned from Reported Code in Stage 3 (after joint) 4 = Allocated from Joint Matrix 1, (detailed) 5 = Allocated from Joint Matrix 1 (collapsed) 6 = Allocated from Joint Matrices 10-13, (detailed) 7 = Allocated from Joint Matrices 10-13, (collapsed) **QCOW** 0 = Not in universe (Less than 16 years old or did not work in the last 5 years)	**FCOW** COW ALLOCATION FLAG 0 = As reported or not in universe 1 = Assigned from reported code in Stage 1 2 = Assigned from reported code in Stage 2 3 = Assigned from reported code in Stage 3 (after JOINT) 4 = Allocated from Joint Matrix 1 (detailed) 5 = Allocated from Joint Matrix 1 (collapsed) 6 = Allocated from Joint Matrices 10-13 (detailed) 7 = Allocated from Joint Matrices 10-13 (collapsed) **COW** missing = Not in universe 1 = Private for profit 2 = Private not for profit 3 = Local government

Item Description	Census Item	ASC Item
	1 = Employee of PRIVATE FOR PROFIT 2 = Employee of PRIVATE NOT-FOR-PROFIT 3 = Employee of LOCAL GOVERNMENT 4 = Employee of STATE GOVERNMENT 5 = Employee of FEDERAL GOVERNMENT 6 = SELF-EMPLOYED in NOT INCORPORATED 7 = SELF-EMPLOYED in INCORPORATED 8 = Working WITHOUT PAY in family business	4 = State government 5 = Federal government 6 = Self-employed not incorporated 7 = Self-employed incorporated 8 = Without pay--family 9 = Unemployed
Weeks Worked Last Year	**FWKLYRWK** QWKLYRWK EDIT/ALLOCATION FLAG 0 = Not changed or Not in universe 1 = Changed by consistency edit 4 = Allocated **QWKLYRWK** 00 = Not in universe (QWKLYR=0 or 2) 01-52 = 1 to 52 weeks worked last year	**FWKW** WKW ALLOCATION FLAG 0 = Not changed 1 = Changed by consistency edit 4 = Allocated from MJ1 (detailed) 5 = Allocated from MJ1 (collapsed) 6 = Allocated from MJ2-8 (detailed) 7 = Allocated from MJ2-8 (collapsed) **WKW** missing = Not in universe 1..52 = Weeks
Hours Worked Each Week	**FWKLYRHR** QWKLYRHR EDIT/ALLOCATION FLAG 0 = Not changed or Not in universe 1 = Changed by consistency edit 4 = Allocated **QWKLYRHR** 0 = Not in universe (QWKLYR=0 or 2) 01-99 = 1 to 99 hours usually worked per week worked	**FWKH** WKH ALLOCATION FLAG 0 = Not changed 1 = Changed by consistency edit 2 = Hours capped at 99 4 = Allocated from MJ1 (detailed) 5 = Allocated from MJ1 (collapsed) 6 = Allocated from MJ2-8 (detailed) 7 = Allocated from MJ2-8 (collapsed) **WKH** missing = Not in universe 1..99 = Hours

Item Description	Census Item	ASC Item
Wages & Salary Income	**FINCWG** QINCWG EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCWG** (WAGES, SALARY, COMMISSIONS, BONUSES, OR TIPS FROM ALL JOBS) blank = Not in universe (QAGE<15) 000000 = No/none 000001-999998 = $1 to $999,998 999999 = $999,999 or more	**FWAG** WAG ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **WAG** missing = Not in universe 0 = No/none 1..999999 = Wages/salary income
Self-employment Income	**FINCSE** QINCSE EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCSE** (SELF-EMPLOYMENT INCOME FROM OWN NONFARM BUSINESSES OR FARM BUSINESSES, INCLUDING PROPRIETORSHIPS AND PARTNERSHIPS) blank = Not in universe (QAGE<15) -09999 = Loss of $9,999 or more -00001 to -09998 = Loss of $1 to $9,998 000000 = No/none 000001 = Break even or $1 000002-999998 = $2 to $999,998 999999 = $999,999 or more	**FSEM** SEM ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **SEM** missing = Not in universe -9999..999999 = Self-employment income where 0 = No/none and 1 = Break even

Item Description	Census Item	ASC Item
Interest, Dividend, etc. Income	**FINCINT** QINCINT EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCINT** (INTEREST, DIVIDENDS, NET RENTAL INCOME, ROYALTY INCOME, OR INCOME FROM ESTATES AND TRUSTS) blank = Not in universe (QAGE<15) -09999 = Loss of $9,999 or more -00001 to -09998 = Loss of $1 to $9,998 000000 = No/none 000001 = Break even or $1 000002-999998 = $2 to $999,998 999999 = $999,999 or more	**FINT** INT ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **INT** missing = Not in universe -9999..999999 = Interest, net rental, etc. income where 0 = No/none and 1 = Break even
Social Security/Railroad Retirement	**FINCSS** QINCSS EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCSS** SOCIAL SECURITY INCOME IN 1999 (SOCIAL SECURITY OR RAILROAD RETIREMENT) blank = Not in universe (QAGE<15) 00000 = No/none 00001-99998 = $1 to $99,998 99999 = $99,999 or more	**FSS** SS ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **SS** missing = Not in universe 0 = No/none 1..99999 = Social Security or Railroad Retirement Income

Item Description	Census Item	ASC Item
Supplemental Security Income	**FINCSSI** QINCSSI EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCSSI** blank = Not in universe (QAGE<15) 00000 = No/none 00001-99998= $1 to $99,998 99999 = $99,999 or more	**FSSI** SSI ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **SSI** missing = Not in universe 0 = No/none 1..99999 = Supplemental Security Income
Public Assistance	**FINCPA** QINCPA EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCPA** (ANY PUBLIC ASSISTANCE OR WELFARE PAYMENTS FROM THE STATE OR LOCAL WELFARE OFFICE) blank = Not in universe (QAGE<15) 00000 = No/none 00001-99998= $1 to $99,998 99999 = $99,999 or more	**FPA** PA ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **PA** missing = Not in universe 0 = No/none 1..99999 = Public assistance income
Retirement Income	**FINCRET** QINCRET EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1	**FRET** RET ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup

Item Description	Census Item	ASC Item
	5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCRET** (RETIREMENT, SURVIVOR, OR DISABILITY PENSIONS) blank = Not in universe (QAGE<15) 000000 = No/none 000001-999998 = $1 to $999,998 999999 = $999,999 or more	4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **RET** missing = Not in universe 0 = No/none 1..999999 = Retirement Income
Other Income	**FINCOTH** QINCOTH EDIT/ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-28 7 = Joint allocation from collapsed matrices 14-28 **QINCOTH** (ANY OTHER SOURCES OF INCOME RECEIVED REGULARLY SUCH AS VETERANS' (VA) PAYMENTS, UNEMPLOYMENT COMPENSATION, CHILD SUPPORT, OR ALIMONY) blank = Not in universe (QAGE<15) 000000 = No/none 000001-099998 = $1 to $99,998 099999 = $99,999 or more	**FOI** OI ALLOCATION FLAG 0 = As reported or not in universe 1 = Reported value adjusted 2 = Assigned based on the reported total 3 = Step 27 cleanup 4 = Joint allocation from detailed matrix 1 5 = Joint allocation from collapsed matrix 1 6 = Joint allocation from detailed matrices 14-25 7 = Joint allocation from collapsed matrices 14-25 **OI** missing = Not in universe 0 = No/none 1..999999 = Other income amount
All Income Allocated	**QINCTSOME** Persons with 1 or more allocated detail items including persons with 100 percent of income allocated. Note: There are eight detail items. They are qincwg, qincse, qincint, qincss, qincssi, qincpa, qincret, qincoth.	**FTI** TI ALLOCATION FLAG 0 = Not changed 3 = Allocated by consistency edit 4 = Allocated by JOINT

Item Description	Census Item	ASC Item
	A person with some or all of their income allocated where identified using the following method. qinctot = total absolute income or the sum of the absolute values of the eight detail items ainctot = total absolute allocated income or the sum of the absolute values of the eight detail items where the allocation flag for a detail item was greater than or equal to 4. ia = number of allocated detail items. if qinctot = ainctot then if ia > 0 then 100% of income allocated; else no income allocated; else if ia >0 then some income allocated (but not all); else no income allocated;	**TI** missing = Not in universe -19998..9999999 = Total income where 0 = No/none and 1 = Break even
Housing Unit Item		
Tenure	**FTENURE** STENURE EDIT/ALLOCATION FLAG 0 = As reported 1 = Assigned by consistency check 4 = Allocated from hot deck 7 = Substituted **STENURE** "IS THIS HOUSE, APARTMENT, OR MOBILE HOME --" 0 = Not in universe (vacant) 1 = Owned by you or someone in this household with a 2 = Owned by you or someone in this household free and 3 = Rented for cash rent 4 = Occupied without payment of cash rent	**FTEN** TEN ALLOCATION FLAG 0 = Not changed 1 = Assigned by internal consistency check 4 = Allocated **TEN** missing = Not in universe 1 = Owned with a mortgage 2 = Owned free and clear 3 = Rented for cash 4 = No cash rent
Units in Structure	**FBLDGSZ** SBLDGSZ EDIT/ALLOCATION FLAG 0 = Not allocated 4 = Allocated	**FBLD** BLD ALLOCATION FLAG 0 = Not allocated 4 = Allocated

Item Description	Census Item	ASC Item
	SBLDGSZ "WHICH BEST DESCRIBES THIS BUILDING?" 01 = A mobile home 02 = A one-family home detached from any other house 03 = A one-family house attached to one or more houses 04 = A building with 2 apartments 05 = A building with 3 or 4 apartments 06 = A building with 5 to 9 apartments 07 = A building with 10 to 19 apartments 08 = A building with 20 to 49 apartments 09 = A building with 50 or more apartments 10 = Boat, RV, van, etc.	**BLD** 1 = Mobile home 2 = Detached one-family house 3 = Attached one-family house 4 = Building with 2 apartments 5 = Building with 3 to 4 apartments 6 = Building with 5 to 9 apartments 7 = Building with 10 to 19 apartments 8 = Building with 20 to 49 apartments 9 = Building with 50+ apartments 10 = Other (Boat/RV/van, etc.)
Year Built	**FYRBLT** SYRBLT EDIT/ALLOCATION FLAG 0 = Not allocated 4 = Allocated **SYRBLT** "ABOUT WHEN WAS THIS BUILDING FIRST BUILT?" 1 = 1999 to 2000 2 = 1995 to 1998 3 = 1990 to 1994 4 = 1980 to 1989 5 = 1970 to 1979 6 = 1960 to 1969 7 = 1950 to 1959 8 = 1940 to 1949 9 = 1939 or earlier	**FYBL** YBL ALLOCATION FLAG 0 = Not allocated 4 = Allocated **YBL** 1 = 1999 or later 2 = 1995 to 1998 3 = 1990 to 1994 4 = 1980 to 1989 5 = 1970 to 1979 6 = 1960 to 1969 7 = 1950 to 1959 8 = 1940 to 1949 9 = 1939 or earlier

Item Description	Census Item	ASC Item
Year Moved In	**FMOVEIN** SMOVEIN EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SMOVEIN** "WHEN DID THIS PERSON MOVE INTO THIS...?" blank = Not in universe (vacant) 1 = 1999 or 2000 2 = 1995 to 1998 3 = 1990 to 1994 4 = 1980 to 1989 5 = 1970 to 1979 6 = 1969 or earlier	**FMVY** MVY ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **MVY** missing = Not in universe RDATE(yyyy)-116..RDATE(yyyy) = Year
Rooms	**FROOM** SROOM EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SROOM** "HOW MANY ROOMS DO YOU HAVE IN THIS...?" 1-8 = 1-8 rooms 9 = 9 or more rooms	**FRMS** RMS ALLOCATION FLAG 0 = Not allocated 4 = Allocated **RMS** 1 = 1 room 2 = 2 rooms 3 = 3 rooms 4 = 4 rooms 5 = 5 rooms 6 = 6 rooms 7 = 7 rooms 8 = 8 rooms 9 = 9 or more rooms
Bedrooms	**FBEDRM** SBEDRM EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated	**FBDS** BDS ALLOCATION FLAG 0 = Not allocated 4 = Allocated

Item Description	Census Item	ASC Item
	SBEDRM "HOW MANY BEDROOMS DO YOU HAVE?" 0 = No bedroom 1-4 = 1-4 bedrooms 5 = 5 or more bedrooms	**BDS** 0 = No bedroom 1 = 1 bedroom 2 = 2 bedrooms 3 = 3 bedrooms 4 = 4 bedrooms 5 = 5 or more bedrooms
Complete Plumbing	**FCPLUMB** SCPLUMB EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SCPLUMB** "DO YOU HAVE COMPLETE PLUMBING FACILITIES...?" 1 = Yes, have all three facilities 2 = No	**FPLM** PLM ALLOCATION FLAG 0 = Not allocated 4 = Allocated **PLM** 1 = Yes, has all three FACILITIES 2 = No
Complete Kitchen	**FCKITCH** SCKITCH EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SCKITCH** "DO YO HAVE COMPLETE KITCHEN FACILITIES...?" 1 = Yes, have all three facilities 2 = No	**FKIT** KIT ALLOCATION FLAG 0 = Not allocated 4 = Allocated **KIT** 1 = Yes, has all three FACILITIES 2 = No
Telephone	**FTEL** STEL EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **STEL** "IS THERE TELEPHONE SERVICE AVAILABLE...?" blank = Not in universe (vacant) 1 = Yes 2 = No	**FTEL** TEL ALLOCATION FLAG 0 = Not allocated 4 = Allocated **TEL** missing = Not in universe 1 = Yes 2 = No

Item Description	Census Item	ASC Item
Heating Fuel	**FFUEL** SFUEL EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SFUEL** "WHICH FUEL IS USED MOST FOR HEATING...?" blank = Not in universe (vacant) 1 = Gas: from underground pipes serving neighborhood 2 = Gas: bottled, tank, or LP 3 = Electricity 4 = Fuel oil, kerosene, etc. 5 = Coal or coke 6 = Wood 7 = Solar energy 8 = Other fuel 9 = No fuel used	**FHFL** HFL ALLOCATION FLAG 0 = Not allocated 4 = Allocated **HFL** missing = Not in universe 1 = Piped gas 2 = Bottled, tank, or LP gas 3 = Electricity 4 = Fuel oil, kerosene, etc. 5 = Coal or coke 6 = Wood 7 = Solar energy 8 = Other fuel 9 = No fuel used
Number of Vehicles	**FAUTOS** SAUTOS EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SAUTOS** "HOW MANY AUTOMOBILES, VANS, AND TRUCKS...?" blank = Not in universe (vacant) 0 = None 1-5 = 1-5 6 = 6 or more	**FVEH** VEH ALLOCATION FLAG 0 = Not allocated 4 = Allocated **VEH** missing = Not in universe 0 = None 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 or more
Business on Property	**FBIZ** SBIZ EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated	**FBUS** BUS ALLOCATION FLAG 0 = Not allocated 4 = Allocated

Item Description	Census Item	ASC Item
	SBIZ "IS THERE A BUSINESS…ON THIS PROPERTY?" blank = Not in universe (SBLDGSZ>3) 1 = Yes 2 = No	**BUS** missing = Not in universe 1 = Yes 2 = No
Lot Size	**FACRES** SACRES EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SACRES** "HOW MANY ACRES IS THIS HOUSE ON?" blank = Not in universe (SBLDGSZ>3) 1 = Less than 1 acre 2 = 1 to 9.9 acres 3 = 10 or more acres	**FACR** ACR ALLOCATION FLAG 0 = Not allocated 4 = Allocated **ACR** missing = Not in universe 1 = Less than 1 acre 2 = 1 to 9.9 acres 3 = 10+ acres
Agricultural Sales	**FAGSALES** SAGSALES EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Edited 4 = Allocated **SAGSALES** "IN 1999, WHAT WERE THE ACTUAL SALES OF ALL AGRICULTURAL PRODUCTS FROM THIS PROPERTY?" blank = Not in universe (vacant or SACRES=1 or SBLDGSZ>3) 0 = None 1 = $1 to $999 2 = $1,000 to $2,499 3 = $2,500 to $4,999 4 = $5,000 to $9,999 5 = $10,000 or more	**FAGS** AGS ALLOCATION FLAG 0 = Not allocated 4 = Allocated **AGS** missing = Not in universe 1 = None 2 = $1 to $999 3 = $1,000 to $2,499 4 = $2,500 to $4,999 5 = $5,000 to $9,999 6 = $10,000 or more

Item Description	Census Item	ASC Item
Electricity Cost	**FELECBX** SELECBX EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SELECBX** ANNUAL COST OF ELECTRICITY (CHECK BOX) blank = Not in universe (vacant) or SELECD>0000 1 = Included in rent or condominium fee 2 = No charge or electricity not used	**FELE** ELE ALLOCATION FLAG 0 = Not allocated 4 = Allocated **ELE** missing = Not in universe 1 = Included in rent or in condo fee 2 = No charge/not used 3..625 = Monthly electricity cost
Gas Cost	**FGASBX** SGASBX EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SGASBX** ANNUAL COST OF GAS (CHECK BOX) blank = Not in universe (vacant) or SGASD>0000 1 = Included in rent or condominium fee 2 = No charge or gas not used	**FGAS** GAS ALLOCATION FLAG 0 = Not allocated 4 = Allocated **GAS** missing = Not in universe 1 = Included in rent or in condo fee 2 = Included in electricity payment 3 = No charge/not used 4..625 = Monthly gas cost
Water and Sewer Cost	**FWATERBX** SWATERBX EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SWATERBX** ANNUAL COST OF WATER AND SEWER (CHECK BOX) blank = Not in universe (vacant) or SWATERD>0000 1 = Included in rent or condominium fee 2 = No charge or not used	**FWAT** WAT ALLOCATION FLAG 0 = Not allocated 4 = Allocated **WAT** missing = Not in universe 1 = Included in rent or in condo fee 2 = No charge 3..5000 = Yearly water and sewer cost
Other Fuel Cost	**FOILBX** SOILBX EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated	**FFUL** FUL ALLOCATION FLAG 0 = Not allocated 4 = Allocated

Item Description	Census Item	ASC Item
	SOILBX ANNUAL COST OF OIL, KEROSENE, WOOD (CHECK BOX) blank = Not in universe (vacant) or SOILD>0000 1 = Included in rent or condominium fee 2 = No charge or these fuels not used	**FUL** missing = Not in universe 1 = Included in rent or in condo fee 2 = No charge/not used 3..7500 = Yearly other fuel cost
Monthly Rent	**FRENT** SRENT EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SRENT** "WHAT IS THE MONTHLY RENT?" blank = Not in universe (STENURE is not 3 and SISVAC is not 1) 0001-3999 = $1 to $3,999 4000 = $4,000 or more	**FRNT** RNT ALLOCATION FLAG 0 = Not allocated 4 = Allocated **RNT** SAS missing = Not in universe 1..99999 = Monthly rent
Meals in Rent	**FMEALS** SMEALS EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SMEALS** "DOES THE MONTHLY RENT INCLUDE ANY MEALS?" blank = Not in universe (STENURE not 3 & SISVAC not 1) 1 = Yes 2 = No	**FRNTM** RNTM ALLOCATION FLAG 0 = Not allocated 4 = Allocated **RNTM** missing = Not in universe 1 = Yes 2 = No
Mortgage	**FMORTG** SMORTG EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SMORTG** "DO YOU HAVE A MORTGAGE... ON THIS PROPERTY?" blank = Not in universe (renter-occupied or vacant units) 1 = Yes, mortgage, deed of trust, or similar debt 2 = Yes, contract to purchase 3 = No	**FMRGX** MRGX ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **MRGX** missing = Not in universe 1 = Yes,mortgage,deed of trust,etc. 2 = Yes, contract to purchase 3 = No

Item Description	Census Item	ASC Item
Mortgage Payment	**FMORTGD** SMORTGD EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SMORTGD** REGULAR MONTHLY MORTGAGE PAYMENT (DOLLAR AMOUNT) blank = Not in universe (vacant, renter occupied, owner occupied without a mortgage, or SMORTG=3) 00000 = No regular payment 00001-10999= $1 to $10,999 11000 = $11,000 or more	**FMRG** MRG ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **MRG** missing = Not in universe 0 = No regular payment 1..11000 = Mortgage payment
Payments include Property Taxes	**FINCTAX** SINCTAX EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SINCTAX** "DOES MORTGAGE PAYMENT INCLUDE REAL ESTATE TAXES?" blank = Not in universe (vacant, renter occupied, owner occupied without a mortgage, or SMORTG=3) 1 = Yes, taxes included in mortgage payment 2 = No, taxes paid separately or taxes not required	**FMRGT** MRGT ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **MRGT** missing = Not in universe 1 = Yes 2 = No, paid separately or not required
Payment includes Insurance	**FINCINS** SINCINS EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SINCINS** "DOES MORTGAGE PAYMENT INCLUDE INSURANCE?" blank = Not in universe (vacant, renter occupied, owner occupied without a mortgage, or SMORTG=3) 1 = Yes, insurance included in mortgage payment 2 = No insurance paid separately or no insurance	**FMRGI** MRGI ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **MRGI** missing = Not in universe 1 = Yes 2 = No, paid separately or no insurance

Item Description	Census Item	ASC Item
Second Mortgage Payment	**FMORTG2D** SMORTG2D EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SMORTG2D** MONTHLY SECOND MORTGAGE PAYMENT (DOLLAR AMOUNT) blank = Not in universe (vacant, renter occupied, owner occupied without a mortgage, owner occupied with SMORTG=3, or SMORTG2=3) 00000 = No regular payment 00001-10999= $1 to $10,999 11000 = $11,000 or more	**FSM** SM ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SM** missing = Not in universe 0 = No regular payment 1..99999 = Monthly other mortgage payment
Yearly Real Estate Taxes	**FTAXD** STAXD EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **STAXD** REAL ESTATE TAXES LAST YEAR (DOLLAR AMOUNT) blank = Not in universe (renter-occupied or vacant but not for sale only) 00000-22499= $0 to $22,499 22500 = $22,500 or more	**FTAX** TAX ALLOCATION FLAG 0 = Not allocated 4 = Allocated jointly with value from MVAL_3 5 = Allocated as a function of value from MTAX **TAX** SAS missing = Not in universe 0..99999 = Real estate taxes
Yearly Property Insurance	**FINSD** SINSD EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SINSD** ANNUAL PROPERTY INSURANCE PAYMENT (DOLLAR AMOUNT) blank = Not in universe (renter-occupied or vacant units) 0000-5999 = $0 to $5,999 6000 = $6,000 or more	**FINS** INS ALLOCATION FLAG 0 = Not allocated 4 = Allocated **INS** SAS missing = Not in universe 0..5000 = Insurance payment

Item Description	Census Item	ASC Item
Value	**FVALUE** SVALUE EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SVALUE** "WHAT IS THE VALUE OF THIS PROPERTY?" blank = Not in universe (STENURE=3,4 or SISVAC=1,3-6) 01 = Less than $10,000 02 = $10,000 to $14,999 03 = $15,000 to $19,999 04 = $20,000 to $24,999 05 = $25,000 to $29,999 06 = $30,000 to $34,999 07 = $35,000 to $39,999 08 = $40,000 to $49,999 09 = $50,000 to $59,999 10 = $60,000 to $69,999 11 = $70,000 to $79,999 12 = $80,000 to $89,999 13 = $90,000 to $99,999 14 = $100,000 to $124,999 15 = $125,000 to $149,999 16 = $150,000 to $174,999 17 = $175,000 to $199,999 18 = $200,000 to $249,999 19 = $250,000 to $299,999 20 = $300,000 to $399,999 21 = $400,000 to $499,999 22 = $500,000 to $749,999 23 = $750,000 to $999,999 24 = $1,000,000 or more	**FVAL** VAL ALLOCATION FLAG 0 = Not allocated 1 = Assigned from high value matrix 2 = Assigned from two reported variables 3 = Assigned by multiplying by 1,000 4 = Allocated jointly with taxes from MVAL_3 **VAL** missing = Not in universe 1 = Less than $10,000 2 = $10,000 to $14,999 3 = $15,000 to $19,999 4 = $20,000 to $24,999 5 = $25,000 to $29,999 6 = $30,000 to $34,999 7 = $35,000 to $39,999 8 = $40,000 to $49,999 9 = $50,000 to $59,999 10 = $60,000 to $69,999 11 = $70,000 to $79,999 12 = $80,000 to $89,999 13 = $90,000 to $99,999 14 = $100,000 to $124,999 15 = $125,000 to $149,999 16 = $150,000 to $174,999 17 = $175,000 to $199,999 18 = $200,000 to $249,999 19 = $250,000 to $299,999 20 = $300,000 to $399,999 21 = $400,000 to $499,999 22 = $500,000 to $749,999 23 = $750,000 to $999,999 24 = $1,000,000 or more

Item Description	Census Item	ASC Item
Total Cost on Mobile Home	**FMHCOST** SMHCOST EDIT/ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **SMHCOST** "WHAT IS THE TOTAL COST…ON THIS MOBILE HOME?" blank = Not in universe (STENURE not 1-2 or SBLDGSZ 00000-19999 = $0 to $19,999 20000 = $20,000 or more	**FMH** MH ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **MH** SAS missing = Not in universe 0..99999 = Yearly mobile home costs
Vacancy Status Note: This item is for vacant housing units only	**FSISVAC** SISVAC EDIT/ALLOCATION FLAG 0 = As reported 1 = Assigned by internal consistency check 4 = Allocated from hot deck 7 = Substituted **SISVAC** VACANCY STATUS 0 = Not in universe (occupied) 1 = For rent 2 = For sale only 3 = Rented or sold, not occupied 4 = For seasonal, recreational, or occasional use 5 = For migrant workers 6 = Other vacant	**FVACS** VACS ALLOCATION FLAG 0 = Not allocated 1 = Assigned by internal consistency check 4 = Allocated **VACS** missing = Not in universe 1 = For rent 2 = For sale only 3 = Rented or sold, not occupied 4 = Seasonal/recreational/occasional use 5 = For migrant workers 6 = Other vacant

Attachment 2
Percent in Sample Levels for each of the 36 Counties

	County/State	St/Co Code	Percent Population-in-Sample Levels	Percent Households-in-Sample Levels
1	Pima County, AZ	04019	1	1
2	Jefferson County, AR	05069	2	1
3	San Francisco County, CA	06075	1	1
4	Tulare County, CA	06107	2	2
5	Broward County, FL	12011	1	1
6	Upson County, GA	13293	1	1
7	Lake County, IL	17097	1	1
8	Miami County, IN	18103	2	2
9	Black Hawk County, IA	19013	2	2
10	De Soto Parish, LA	22031	2	2
11	Calvert County, MD	24009	1	1
12	Hampden County, MA	25013	1	1
13	Madison County, MS	28089	1	1
14	Iron County, MO	29093	4	4
15	Reynolds County, MO	29179	4	4
16	Washington County, MO	29221	2	2
17	Flathead County, MT	30029	2	2
18	Lake County, MT	30047	2	2
19	Douglas County, NE	31055	1	1
20	Otero County, NM	35035	2	2
21	Bronx Borough, NY	36005	1	1
22	Rockland County, NY	36087	1	1
23	Franklin County, OH	39049	1	1
24	Multnomah County, OR	41051	1	1
25	Fulton County, PA	42057	4	4
26	Schuylkill County, PA	42107	2	2
27	Sevier County, TN	47155	1	1
28	Fort Bend County, TX	48157	1	1
29	Harris County, TX	48201	1	1
30	Starr County, TX	48427	1	1
31	Zapata County, TX	48505	1	1
32	Petersburg City, VA	51730	1	1
33	Yakima County, WA	53077	1	1
34	Ohio County, WV	54069	2	2
35	Oneida County, WI	55085	3	3
36	Vilas County, WI	55125	4	4

Attachment 3
Design Factors Used for Census Quality Measures Standard Errors

For the self-response rates, unit nonresponse rates, and housing unit completeness ratio, identify the largest design factor from the following housing unit characteristics.

- Race of householder
- Age of householder
- Type of residence

For the population completeness ratio, identify the largest design factor from the following population characteristics.

- Race
- Age
- Household type and relationship
- Family type

For the item allocation rates, the following table lists the items for which an allocation rate will be calculated, and the population/housing characteristic group which most relates to that item. The design factor for the population/housing characteristic group listed will then be applied to the item allocation rate standard errors. The bold housing unit allocation rate items are vacant housing units items.

Group Number	Design Factor Population/Housing Characteristic Group	Allocation Rate Item
Population Characteristics and Groups		
P1	Age	Age
P6	Household type and relationship	Relationship
P2	Sex	Sex
P3	Race	Race
P4	Hispanic or Latino	Hispanic
P5	Marital Status	Marital Status
P15	School enrollment	School enrollment
		Grade attending
P14	Educational attainment	Educational attainment
P13	Language spoken at home and ability to speak English	Non-English language
		Language spoken
		English ability
P9	Place of birth	Place of birth
P10	Citizenship status	citizenship
P12	Year of entry	Year of entry
P11	Residence in 1995	Mobility status
		Migration – state
		Migration – county
		Migration – place

Group Number	Design Factor Population/Housing Characteristic Group	Allocation Rate Item
P7	Disabled and employment disability	Vision or hearing difficulty
		Physical difficulty
		Mental difficulty
		Self-care difficulty
		Difficulty going out
		Difficulty working at a job
P37	Grandparent status and responsibility for grandchild	Grandparent living at home
		Responsible for grandchildren
		Months responsible for grandchildren
P36	Military service and veteran status	Served in armed forces
		Periods of military service
		Years of active duty
P20	Employment status	Employment status
P26	Place of work	Place of work - state
		Place of work - county
		Place of work - place
P27	Means of transportation to work	Transportation to work
P29	Time leaving home to go to work	Time of departure
P30	Private vehicle occupancy	Carpool size
P28	Travel time to work	Commuting time
P24	Usual hours worked per week and weeks worked in 1999	When last worked
		Weeks worked last year
		Hours worked each week
P21	Industry	Industry
P22	Occupation	Occupation
P23	Class of worker	Class of worker
P31	Type of Income in 1999	Wages & salary income
		Self-employment income
		Interest, dividend, etc. income
		Social security/railroad retirement
		Supplemental security income
		Public assistance
		Retirement income
		Other income
		All income allocated
Housing Unit Characteristics and Groups		
H5	Tenure	Tenure
		Year moved in
H4	Units in structure	**Units in structure/building size**
H10	Year structure built	**Year built**
H11	Rooms, bedrooms	**Rooms**
		Bedrooms
H13	Plumbing facilities	**Complete plumbing**

Group Number	Design Factor Population/Housing Characteristic Group	Allocation Rate Item
H12	Kitchen facilities	**Complete kitchen**
		Telephone
H14	House heating fuel	Heating fuel
		Electricity cost
		Gas cost
		Water and sewer cost
		Other fuel cost
H16	Vehicles available	Number of vehicles
H22	Type of residence	**Business on property**
		Lot size
		Agricultural sales
H8	Gross rent	**Monthly rent**
		Meals in rent
H19	Mortgage status and selected monthly owner costs	Mortgage
		Mortgage payments
		Payment includes property taxes
		Payment includes insurance
		Second mortgage payment
		Yearly real estate taxes
		Yearly property insurance
		Total cost on mobile home
H7	Value	**Value**
H6	Occupancy status	**Vacancy status**